

REMARKS

The present amendment is submitted in an earnest effort to place this case in condition for allowance forthwith.

1. The Examiners comments with respect to priority in the detailed action have been noted. The specification has been amended to provide a cross reference to the foreign application from which priority derives.

The petition requirement only applies if priority has not originally been awarded in the case in the filing receipt and in the present application the filing receipt contains the priority information. The amendment of the specification to include the reference to the German application has been provided to satisfy the Examiner's requirement but no petition or further action is or was necessary.

2. Claims 9 to 14 and 17 have been allowed. A minor amendment has been made in claim 9. Otherwise, all of the allowed claims remain the same.

3. Claims 15 and 16 stand rejected on newly cited art. Those claims have not been amended since, in Applicants view, they distinguish both in terms and in spirit over the references as applied.

4. Reconsideration of the rejection of claim 15 as anticipated by Hager et al Patent 6,384,614 is requested. The references simply do not disclose, as recited in claim 15, two electrically separate surfaces positioned to contact simultaneously a sample of each of two electrode bodies with an excitation source connected to one surface of each body and a high ohmic electrical potential measuring unit connected to the other surface. That the reference does not show two different units connected to two electrically separated surfaces of the same electrode body of two electrode bodies is clear from FIG. 3 and column 3, lines 41 to 43 in which it is apparent that proximal ends 130, 132 of the conductors are coupled together and to the distal end 106 of the probe tip, i.e. one and the same electrode surface.

Since the reference does not fully meet claim 15, the rejection of claim 15 as anticipated by Hager must be withdrawn.

5. The Hager reference would not be applicable under 35 USC 103 against claim 15 either. The Examiners interpretation of Hager et al is believed to be in error. On page 3 of the office action, the Examiner suggests that Hager shows two electrode bodies, each with two surfaces electrically insulated from one another. This is simply not correct. The electrode bodies in Hager are not the equivalent in their construction or in their use in the measurement principles to the electrodes of the present application and particularly those of claim 15 since the conductors for the feed current and voltage measurement are not connected to different electrode surfaces of a common probe which are electrically isolated from one another.

The passage cited by the Examiner to this effect at column 1, lines 45 ff of the reference cannot be interpreted as supporting the Examiner's position here since the mention of different terminals there does not change the fact that the two conductors, as noted, are connected to one and the same electrode surface. The reference, far from suggesting that two distinct surfaces, electrically isolated from one another be provided on each probe, one for current feed and the other for voltage

measurement, expressly teaches that both conductors should run to the same surface and thus represents a teaching away from the invention.

6. Nor does Christy et al have a plurality of conductors inserted into the soil (elements 64) with two separate surfaces each. There is no suggestion in Christy et al that each of the coulter could have two distinct surfaces simultaneously in the soil and allowing excitation and voltage measurement simultaneously by connection to respective electrically separated surfaces of each electrode body. Claim 15 would not, therefore, be obvious from a combination of Christy et al with Hager.

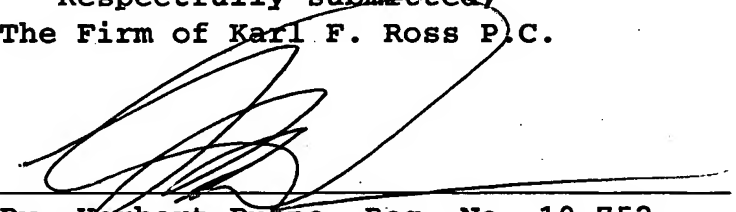
7. Claim 16 has been rejected on a combination of these references as well but since claim 16 also requires two electrically separate surfaces, the source connected to one and the measuring unit to the other, that claim must be deemed to distinguish over the combination as well.

In the opinion of Applicants, therefore, the electrode configuration of Christy et al cannot perform a three dimensional tomographic electrical conductivity distribution in a ground sample as claim 16 requires.

Claims 15 and 16 are therefore deemed to be allowable together with claims 9 to 14 and 17.

An early notice to that effect is earnestly solicited.

Respectfully submitted,  
The Firm of Karl F. Ross P.C.



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By: Herbert Dubno, Reg. No. 19,752  
Attorney for Applicant

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November 9, 2005  
5676 Riverdale Avenue Box 900  
Bronx, NY 10471-0900  
Cust. No.: 535  
Tel: (718) 884-6600  
Fax: (718) 601-1099